

| | | | | | | | |
|--|--|--|--|---|--|---|--|
| AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT | | | | 1. CONTRACT ID CODE <div style="text-align: center;">J</div> | | PAGE OF PAGES <div style="text-align: center;">1 3</div> | |
| 2. AMENDMENT/MODIFICATION NO. <div style="text-align: center;">0008</div> | | 3. EFFECTIVE DATE <div style="text-align: center;">07-Jul-2004</div> | | 4. REQUISITION/PURCHASE REQ. NO. <div style="text-align: center;">W68SBV-4100-4504</div> | | 5. PROJECT NO.(If applicable) | |
| 6. ISSUED BY <div style="text-align: center;">CODE</div> WALLA WALLA DISTRICT, COE-G4P CONTRACTING DIVISION 201 N THIRD AVENUE WALLA WALLA WA 99362-1876 | | 7. ADMINISTERED BY (If other than item 6) <div style="text-align: center;">CODE</div> <div style="text-align: center; font-weight: bold;">See Item 6</div> | | | | | |
| 8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) | | | | <input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. W912EF-04-B-0014 | | | |
| | | | | <input checked="" type="checkbox"/> 9B. DATED (SEE ITEM 11) 14-May-2004 | | | |
| | | | | 10A. MOD. OF CONTRACT/ORDER NO. | | | |
| | | | | 10B. DATED (SEE ITEM 13) | | | |
| CODE | | FACILITY CODE | | | | | |
| 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS | | | | | | | |
| <input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified. | | | | | | | |
| 12. ACCOUNTING AND APPROPRIATION DATA (If required) | | | | | | | |
| 13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14. | | | | | | | |
| A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. | | | | | | | |
| B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B). | | | | | | | |
| C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: | | | | | | | |
| D. OTHER (Specify type of modification and authority) | | | | | | | |
| E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office. | | | | | | | |
| 14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Subj: JACKSON HOLE STREAM RESTORATION SITE 9 THE CURRENT BID OPENING DATE REMAINS JULY 13, 2004 AT 2:00 P.M. It has been determined necessary and in the best interest of the Government to revise this solicitation in accordance with the following: A. The following two test requirements are removed from the specifications: ASTM D5312 (Freeze/Thaw Cycling) test and the ASTM D5313 (Wet/Dry Cycling) test. See revised section as an attachment. B. Some contractor questions have revised answers -- See numbers 3b, 8, 11 and 12. C. All other terms and conditions remain the same. | | | | | | | |
| Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect. | | | | | | | |
| 15A. NAME AND TITLE OF SIGNER (Type or print) | | | | 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) | | | |
| | | | | TEL: _____ EMAIL: _____ | | | |
| 15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign) | | 15C. DATE SIGNED | | 16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer) | | 16C. DATE SIGNED 07-Jul-2004 | |

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

Contractor questions and answers:

1. The synopsis for the solicitation describes "before and after topographic survey" whereas the bid schedule only mentions the "rock grade control survey" which is to occur: "...after the work is complete or when directed... by the contracting officer". There is only one bid item in the schedule. Should we assume that the synopsis is incorrect, or that two site surveys will be required, but that each will be paid for as a separate item under the bid schedule? i.e. the item would be paid twice, once for each of the two surveys. **Answer Follow the solicitation and not the synopsis which is just the notice of proposed contract action. Your bid must be submitted according to the bid schedule and based entirely on the solicitation and amendments which require acknowledgement.**

2a. After reading the specifications on payment for stockpiled riprap, it is unclear to me if the Contractor gets paid for the stockpiled riprap at the off-site quarry. Does the Contractor have access to stockpile the riprap near the project site before September 7? **Answer NO**

2b. I was told that there is a potential stockpile site in close proximity to the project. Can I have all information on this stockpile site. **Answer -There is no information on this. If the site visit provided some information on this, all contractors had the same right to attend the site visit.** Is it anticipated that the riprap will be stockpiled at the quarry then trucked directly to the project site for installation? Please clarify. **If it is stockpiled by September 3rd, then by the next week it can be taken to the project site for installation. --**

3a. Where do you stockpile the rip rap? **Answer See section 1010 1.12.**

3b. Where is Walton Pit? **Answer Walton Pit is located upstream from the construction site about ½ mile on the left bank (East bank).**

4. What is the length of the access road from Route 22 to the project site or the stockpile area? What is the distance from the stockpile area to the project work site? Can you provide map showing the locations relative to each other? **Answer See Sheet 2. Stockpile area is at quarry site and some measurements can be estimated from the sheet drawings.**

5. The material excavated for the placement of the rock grade control structure may be hauled to and dumped offsite as directed by the Contracting Officer. This location will be within one mile, roundtrip, of the construction area. (Sec 2300-9, 3.4 Rock Grade Control) On the bid schedule for Excavated Material Hauled Offsite, where does this material go? Does this material go to the dump site described above? **Answer Yes**

6. What is the operator mandated wage rate? (excavator, dozer, grader, loader, offroad hauler, etc.) Only crane operators are addressed in General Decision Number: WY020005. **Answer The wage determination is changed back to WY030004. Under Operating Engineer, some operator rates are listed. If an operator rate is not covered that you feel is required, then the contractor must use at least the lowest operator rate in the decision which is \$10.91 per hour in their bid formulation. After award, the contractor then must submit a SF 1444 to establish the correct rate and, once the Department of Labor provides that rate, the contractor must correct the earnings of that type operator to the DOL given rate.**

7. I am inquiring about the required testing for the aggregate on the Jackson Hole Stream Restoration Project as per the specifications. Any help in finding this information would gratefully be appreciated. **Answer** **If what they want is the ASTM Standards, suggest they go to www.astm.org.**

8. How to do diversions? **Answer** **See Section 01355 para 1.12.1 specifies “clean angular rock, jersey barriers...No fill material containing fines shall be used....”**

9. Is there a list of approved rock sources for this project and do you have info on special mineral permits from the Bridger-Teton National Forest?

Answer **I am not aware of a list of approved rock sources. I expect it will not be local since there aren't very many in the area. NOTE: SEE AMENDMENT 0004**

10. What are brush fences, rootwads, and kicker/spur dikes? (Disease free?) Sec 02300-4, 2.1.1 Quarry Source.

Answer **Brush fences are actually eco-fences, rootwads are not in this contract and kicker/spur dikes are fish barbs. We should probably change the terminology in the spec in the amendment we are working on. See amendment change.**

11. In Sec 01270-2, Rock Quarried And Stockpiled. Preliminary Quantity conv. factor 1.167 CD per TN. What does this mean? Can this be accurate for rock w/ a specific gravity of > 2.5. **Answer** **I'm not sure where the conversion factor came from. What I have been using is for riprap rock with a specific gravity of 2.67. The conversion would be 1 Ton = 0.91 CY or 1.1 Ton = 1 CY.**

12. AMD 4, Para 3.3.1 of Section 2300 (Page 9) addresses the modifications to the existing ECO-FENCE. It states that welded wire fabric (cattle panel) and small opening mesh shall be placed on the undamaged portion of all 5 fences. Does this mean that the entire length (existing+addition+replacement of damaged components) of each fence will receive new wire fabric and small opening mesh. Does the entire length of each fence also receive new wire rope? **Answer** **That is correct. The entire length of each fence will receive new wire fabric and small opening mesh. New wire rope will only be placed on the fences as indicated in the paragraph (on the addition to the fences and the replacement of the damaged sections).**

13. Amendment #2 - Section 2300 - 3.3.2 Fence B: Do we install 4 new H-Pile and 4 new round pipe? Fence C - Do we install 4 new H-Pile and 2 new round pipe? Fence D - Do we install 4 new H-Pile and 6 new pipe? Fence E - Do we install 4 new H-Pile and 2 new pipe? **Answer** - **The information provided in the specification must be interpreted by the contractor. See amendment 4 also**

14. Isn't Bid Item 3A & 3B the same work as bid item 14, 15 & 16? What is the difference by scope of work?

Answer - **Bid Item No. 3A and B covers placement of the rock for the rock grade control. Bid Items 14, 15, and 16 cover the Fish Barbs, which are described in the specs and drawings.**

15. What is the Island side? Is it downstream of the structure or is it the existing levee side? **Answer** - **The island side is downstream of the rock grade control structure and landward of the fences (We are not sure what structure you are referring to).**

(End of Summary of Changes)

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE CONSTRUCTION

SECTION 02300

EARTHWORK

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 DEFINITIONS
 - 1.2.1 Satisfactory Materials
 - 1.2.2 Unsatisfactory Materials
- 1.3 SUBMITTALS
- 1.4 DIVERSION AND ACCESS
- 1.5 SURVEY MONUMENTS

PART 2 PRODUCTS

- 2.1 MATERIALS
 - 2.1.1 Quarry Source
 - 2.1.1.1 Rock Source
 - 2.1.2 Rock
 - 2.1.2.1 Requirements
 - 2.1.2.2 Acceptance
 - 2.1.2.3 Stockpile
 - 2.1.3 Random Fill
 - 2.1.4 River Cobbles
- 2.2 ECO-FENCE
 - 2.2.1 Piles
 - 2.2.2 Pile Caps
 - 2.2.3 Wire Rope
 - 2.2.4 Fabrics
 - 2.2.4.1 Welded Wire Fabric
 - 2.2.4.2 Small Opening Mesh
 - 2.2.5 Wire Rope Clips

PART 3 EXECUTION

- 3.1 GENERAL
- 3.2 ECO-FENCE
 - 3.2.1 Excavation
 - 3.2.2 Piles
 - 3.2.3 Wire Rope
 - 3.2.4 Fabrics
 - 3.2.4.1 Welded Wire Fabric
 - 3.2.4.2 Small Opening Mesh
 - 3.2.4.3 Placement
 - 3.2.5 Weights
 - 3.2.6 Connections
 - 3.2.7 End Pile Protection
- 3.3 MODIFICATION OF EXISTING ECO-FENCE
 - 3.3.1 General
 - 3.3.2 Existing Conditions
- 3.4 ROCK GRADE CONTROL

- 3.4.1 Excavation Equipment
- 3.5 SURVEY AS-CONSTRUCTED ROCK GRADE CONTROL
 - 3.5.1 Cross-Sections
 - 3.5.2 Profile
 - 3.5.3 Survey Submittal
- 3.6 FISH BARBS

-- End of Section Table of Contents --

SECTION 02300

EARTHWORK

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

| | |
|-------------|---|
| ASTM C 127 | (2001) Specific Gravity and Absorption of Coarse Aggregate |
| ASTM C 535 | (2001) Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine |
| ASTM D 2487 | (1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System) |
| ASTM D 2488 | (1993e1) Description and Identification of Soils (Visual-Manual Procedure) |

1.2 DEFINITIONS

1.2.1 Satisfactory Materials

Satisfactory materials shall comprise any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP.

1.2.2 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials are unsatisfactory. Unsatisfactory materials also include man-made fills; trash; refuse; backfills from previous construction; and material classified as satisfactory which contains root and other organic matter or frozen material. The Contracting Officer shall be notified of any contaminated materials.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Quarry Source; G, SPE.

DIVERSION AND ACCESS; G, EDC.

Rock; G, CD

Test Results

Eco-Fence; G, EDC.

Data showing materials, piles, pile caps, wire rope, fabrics, and wire rope clips meet specifications.

Survey; G, EDC.

1.4 DIVERSION AND ACCESS

The Contractor shall submit a plan detailing the method of diverting flow in the construction area in accordance with SECTION 01355 and a plan to provide access to install the piles and fence materials.

1.5 SURVEY MONUMENTS

Following are survey monuments in the vicinity of the construction work. Horizontal positions are referenced to the Wyoming West state plane coordinate system (NAD27). Vertical positions are referenced to the National Geodetic Vertical Datum adjustment of 1929 (NGVD29). All markers or pipe and washer or brass cap.

| Northing | Easting | Elevation | Designation |
|------------|-----------|-----------|-------------|
| 1032650.64 | 298023.25 | 6151.97 | R 9RC |
| 1031994.65 | 299739.99 | 6155.37 | R 9LC |
| 1035588.77 | 298937.53 | 6167.25 | R11RB |
| 1034376.00 | 301194.28 | 6166.77 | R11LB |
| 1037423.82 | 299487.60 | 6176.11 | R12RB |
| 1036374.05 | 301678.99 | 6173.42 | R12LB |

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Quarry Source

Contractor shall submit information on the proposed source of quarry material for the rock, random fill, and river cobbles. Information shall include quarry owner, location and the following. As much as possible, materials for construction of eco-fences and fish barbs should be obtained on-site or from a source certified as disease free. If a secondary source of these items is required, this source should be approved by the Wyoming Game and Fish Department, Fisheries Section.

2.1.1.1 Rock Source

The Contractor shall designate in writing only one source or one combination of sources from which he proposes to furnish rock. It is the Contractor's responsibility to determine that the rock source or combination of sources selected is capable of providing the quality,

quantities, and gradation needed to meet the requirements of these specifications. The Contractor shall make arrangements concerning availability of all sources. The payment of royalties, disposal of wastes, and restoration of the borrow areas or quarry upon completion of the work shall be the Contractor's responsibility. The Corps of Engineers occasionally obtains and uses special mineral permits from the Bridger-Teton National Forest. The permit allows the Corps to obtain riprap rock located on land permitted to the Jackson Hole Ski Corporation. The Contractor may not use, in conjunction with this contract, any rock that is already available to the Corps from the Bridger-Teton National Forest.

2.1.2 Rock

2.1.2.1 Requirements

Rock for end pile protection, rock grade control, and fish barbs shall consist of angular rock. Rounded boulders or subrounded rock fragments as defined by ASTM D 2488 will not be acceptable. Rock shall be reasonably well graded. Neither the breadth nor the thickness of any piece of rock shall be less than one-third of its length. Rock shall be 33 inch minus material with not more than 30 percent less than 16 inches and no materials less than 6 inches. A maximum 5 percent waste (rock less than 6 inches in diameter) by weight will be allowed at the delivery site. Rock shall meet the following test requirements for quality:

| TEST | REQUIREMENT |
|-------------------------------|---------------------|
| Specific Gravity (ASTM C 127) | minimum 2.5 |
| Absorption (ASTM C 127) | maximum 2.5 percent |
| LA Wear (ASTM C 535) | 30 percent maximum. |

2.1.2.2 Acceptance

After testing requirements have been satisfied and after or while material is being stockpiled the Contracting Officer will perform a visual inspection at the stockpile. If the Contracting Officer, during the inspection, finds that the rock quality or gradation of rock being furnished are not as specified or are questionable, re-sampling and retesting shall be required.

2.1.2.3 Stockpile

See specification section 01010 for stockpiling and surveying information for the rock.

2.1.3 Random Fill

Random fill material used for the fish barbs shall be 12 inch minus with not more than 30 percent less than 3 inches. The average size shall be 6 inches. Material excavated to construct the toe trench for the dike shown in Sections A and B on sheet 5 shall remain on site and used as random fill material.

2.1.4 River Cobbles

River cobbles shall be 6 inches minus with not more than 30 percent less than 1 inch. River cobbles excavated from the river may be used provided

not more than 30 percent is less than 1 inch in diameter.

2.2 ECO-FENCE

2.2.1 Piles

Pipe piles shall be 12-inch nominal diameter extra strong steel pipes. The yield strength shall be 50 kips per square inch (ksi). The HPiles shall be HP 12X84. The yield strength shall be 50 ksi. The yield strength shall be in accordance with ASTM A 572, High-Strength Low-Alloy Columbium-Vanadium Structural Steel

2.2.2 Pile Caps

Pile caps shall be 0.25 inch thick steel plates, cut to fit the piles. Caps shall be welded to the top of the piles.

2.2.3 Wire Rope

Wire rope shall be 3/8" diameter 6 X 19Class, extra improved plow steel with independent wire rope core (iwrc).

2.2.4 Fabrics

2.2.4.1 Welded Wire Fabric

Welded wire fabric (cattle panels) shall be 1/4" wire with openings 6" X 8".

2.2.4.2 Small Opening Mesh

Small opening mesh fabric shall be wire, minimum 16 gauge, with openings no greater than 2 inches.

2.2.5 Wire Rope Clips

Wire rope clips shall be 3/8" steel with galvanized clips to resist rust and corrosion and forged steel saddles.

PART 3 EXECUTION

3.1 GENERAL

Areas shall be cleared of all vegetation and debris before placement of rock. All random fill and river cobbles shall be compacted by tamping with the bucket of the backhoe immediately after placement of materials.

3.2 ECO-FENCE

Eco-fences shall be built in the approximate locations and to the dimensions shown on the drawings. Exact locations will be as directed by the COR. Water may be flowing through the construction area. A berm or other means of diverting the flow may be required. Some of the piles may need to be placed in areas where a significant amount of erosion has occurred and standing water may remain, even after diversion of flow. In order to obtain equipment access in these locations, some materials may need to be moved to create a work platform. Materials shall not be hauled in from off-site. Materials may be moved around the fences. Any materials moved to create the work platform shall be moved to construct the fences and graded level, after fence construction, to create a smooth surface.

Woody debris in the construction area shall be set aside and repositioned on the upstream side of the fences after the fences have been constructed. The welded wire fabric, small opening mesh, and wire rope, shall be placed as stated in the plans and specifications. This may require removal of some fill material after the piles have been driven.

3.2.1 Excavation

Excavation limits shall be as indicated on the drawings. Excavated material may be reserved for fill over the wire fabrics.

3.2.2 Piles

The 12 piles closest to the island shall be 12-inch steel pipes. The first 10 piles shall be 20 feet long. The remaining 2 piles shall be 40 feet long. The 4 piles located farthest in the river shall be HP 12X84. The H-piles shall be 40 feet long and shall be placed so the flange is upstream/downstream and the wire rope is connected through the web. All piles shall be capped. Caps shall have smooth welds without rough edges.

3.2.3 Wire Rope

The wire rope shall be placed at 1-foot intervals beginning 1 foot below the top of the piles and continuing to the full depth of the draped mesh. Wire rope shall wrap around the end piles and be connected to each pile as indicated on the drawings. Wire rope shall be placed on the downstream and underside of the welded wire fabric. Wire rope shall be placed a minimum of 3 feet below grade and shall lay on the excavated surface, as shown on the drawings. The wire rope and top of the piles shall be to the nearest tenth of a foot. The elevations for the wire ropes shall be as indicated below.

| Fence Label | Elevation of Top Cable |
|-------------|------------------------|
|-------------|------------------------|

| | |
|---|--------|
| A | 6164.6 |
| B | 6164.8 |
| C | 6165.7 |
| D | 6166.5 |
| E | 6167.2 |
| F | 6167.8 |
| G | 6168.4 |

3.2.4 Fabrics

3.2.4.1 Welded Wire Fabric

Prior to placement of the welded wire fabric (cattle panels) material shall be excavated on the upstream side of the fence to a minimum depth of 3 feet and the width required to drape the fabric as indicated on the drawings. Placement of the cattle panels shall begin 1 foot from the top of the piles. The cattle panels shall extend down and lay horizontal on the excavated surface and wire rope, as shown on the drawings.

3.2.4.2 Small Opening Mesh

Small opening mesh shall begin at the existing groundline and extend a minimum of 3 feet below grade. The mesh shall lay horizontal on top of the welded wire fabric.

3.2.4.3 Placement

The welded wire fabric and small opening mesh fabric shall be connected to the wire rope with wire rope clips as indicated on the drawings. The fabrics shall be backfilled with a minimum of 3 feet of river cobbles. The fabrics shall be placed on the full length of the fence as indicated on the drawings. The fabrics draped below the groundline shall extend into the river 5 feet from the end pile.

3.2.5 Weights

Rock weights shall be attached to the fabrics as indicated on the drawings. After the fabrics have been placed, weights shall be placed on top. A piece of welded wire fabric shall be cut, placed over the weights, and attached to the fabrics with a minimum of 5 wire rope clips. Weights shall be a minimum 30 inch diameter and shall be placed 10 feet on center. The first weight shall be placed at the riverward end of the fence.

3.2.6 Connections

Connections shall be as indicated on the drawings and shall be placed on every pile. The wire rope clips shall be installed and tightened according to the manufacturer's specifications. The wire rope clips shall be placed tight against the pile and spot welded to prevent removal by vandals.

3.2.7 End Pile Protection

Rock shall be placed around the pile that is farthest in the river channel. Rock shall surround the pile and shall be placed as shown on the drawings. Rocks shall be placed individually, not dumped.

3.3 MODIFICATION OF EXISTING ECO-FENCE

3.3.1 General

Fence A shall be extended to 105 feet, Fences B, C, and E to 100 feet and Fence D to 130 feet. Materials shall be added to the end of the fences, as required, to bring the existing fences up to the standard of new fences as shown on the contract drawings. Any piles that are no longer vertical shall be removed. All fabric and wire between the damaged piles shall be removed. The damaged piles shall be replaced with new piles, fabric and wire. All materials removed from the area shall be disposed of offsite and in a legal manner by the Contractor. Welded wire fabric (cattle panel) and small opening mesh shall be placed on the undamaged portion of all 5 fences. The ground shall be excavated and the materials shall be placed as shown in "SECTION C - ECO-FENCE" on sheet 3 of the contract drawings.

3.3.2 Existing Conditions

As of June 2004, the fences were in the following conditions:

| Fence Label | Damaged Piles | | New Piles to Install | | | Pile Spacing |
|----------------|------------------|------------------------|----------------------------|----------------------------|--|-----------------|
| | to be Removed | HP 12X84 40 ft long | 12-inch Pipe 40 ft long | 12-inch Pipe 20 ft long | | |
| A | 0 | 1 | 0 | 0 | | 5 ft |
| B | 1 | 4 | 2 | 4 | | 5 ft |
| C | 1 | 4 | 2 | 2 | | 5 ft |
| D | 2 | 4 | 2 | 6 | | 5 ft |

| <u>Damaged Piles</u> | | <u>New Piles to Install</u> | | | |
|----------------------|---------|-----------------------------|--------------|--------------|---------|
| Fence | to be | HP 12X84 | 12-inch Pipe | 12-inch Pipe | Pile |
| Label | Removed | 40 ft long | 40 ft long | 20 ft long | Spacing |
| E | 1 | 4 | 2 | 2 | 5 ft |

3.4 ROCK GRADE CONTROL

The rock grade control structure shall be built in the approximate location and to the dimensions shown on the drawings. Exact location will be as directed by the COR. Rocks shall be placed individually, not dumped. Material excavated for placement of the rock grade control structure shall be placed on the island side of the raised portion of the structure (Section E) or hauled to and stockpiled offsite, as directed by the Contracting Officer. The excavated material shall not be placed at an elevation higher than the rock grade control structure. If hauled off site, the excavated material shall be dumped at a location directed by the Contracting Officer. The site will be within one mile, roundtrip, of the construction area.

3.4.1 Excavation Equipment

Contractor shall use a backhoe for excavation that is capable of moving a minimum of 130 cubic yards per hour.

3.5 SURVEY AS-CONSTRUCTED ROCK GRADE CONTROL

The Contractor shall perform a post construction survey of the rock grade control structure. Horizontal positions shall be referenced to the Wyoming West state plane coordinate System (NAD27). Vertical positions shall be referenced to the National Geodetic Vertical Datum adjustment of 1929 (NGVD29). The unit of measure shall be US Survey feet. Horizontal and vertical positions shall be shown to the nearest one-tenth foot.

3.5.1 Cross-Sections

Data shall be collected at the beginning of the structure and continue at 100-foot cross-section intervals. The last cross-section shall be at the end of the structure, even if the interval is less than 100 feet. Cross-section data shall extend 50 feet from the toe of each side of the structure.

3.5.2 Profile

Centerline profile data shall be collected with spot elevations. Profile data shall be collected at the beginning of the structure and continue at 10-foot intervals. The last data point shall be at the end of the structure, even if the interval is less than 10 feet.

3.5.3 Survey Submittal

The Contractor shall provide all data collected, including field notes and ASCII files, and one digital design file (compatible with Bentley Microstation - .dgn) showing all cross-sections, the profile, and a plan view. The plan view shall show the control monuments and centerline, edge of crest, and left and right toe of the structure. All horizontal and vertical control monuments utilized, their location (Northing, Easting, and elevation), designation, and description shall be clearly defined. The

notes shall contain cross-section and profile data. The design file shall contain but not be limited to the following information: survey completion date, project name, north arrow, bar scale, contract number, surveyor, and Contractor's designated approval authority.

3.6 FISH BARBS

Fish barbs shall be constructed to the lines and grades shown on the drawings. Exact locations will be as directed by the COR. Rocks shall be placed individually, not dumped.

-- End of Section --